

30 Multiple Choice Questions

1. Water is polluted by
 - A. recreational uses
 - B. adjacent agriculture
 - C. heavy industry
 - D. all of the above

2. In the Western US, water shortages are made more serious by
 - A. the lack of regulation of toilet flush size
 - B. low annual rainfall
 - C. virtually no aquifer
 - D. all of the above

3. Water can be collected for on-site potable use by
 - A. parking lot bioswales
 - B. roof catchment and cisterns
 - C. gray water treatment systems
 - D. all of the above

4. The most economical way to provide tertiary treatment for municipal waste water is
 - A. with a living machine
 - B. by using a constructed wetlands
 - C. by building a state-of-the-art conventional waste treatment plant
 - D. all of the above

5. Paradise Creek's water quality problems began
 - A. with the arrival of 'civilization'
 - B. when mechanized farming became common early in the 20th century
 - C. after World War Two when automobiles, pesticides, and fertilizers became common
 - D. in the last two decades as the urban population of Moscow and Pullman increased dramatically

6. The Paradise Creek drainage lacks
 - A. a constructed wetlands
 - B. creek restoration projects
 - C. stream clean-up efforts
 - D. none of the above



7. At the Portland Water Pollution Control Lab, site scale stormwater control is provided by
 - A. dramatic scuppers that drain into rocky dry wells
 - B. a sculptural retention pond that attracts wildlife
 - C. bioswales integrated into the parking lots
 - D. all of the above

8. Prominent buildings that feature a green roof include
 - A. Multnomah County Courthouse in Portland, OR
 - B. the new convention center in Pittsburgh, PA
 - C. I.M. Pei's East Wing of the National Gallery in Washington, DC
 - D. all of the above

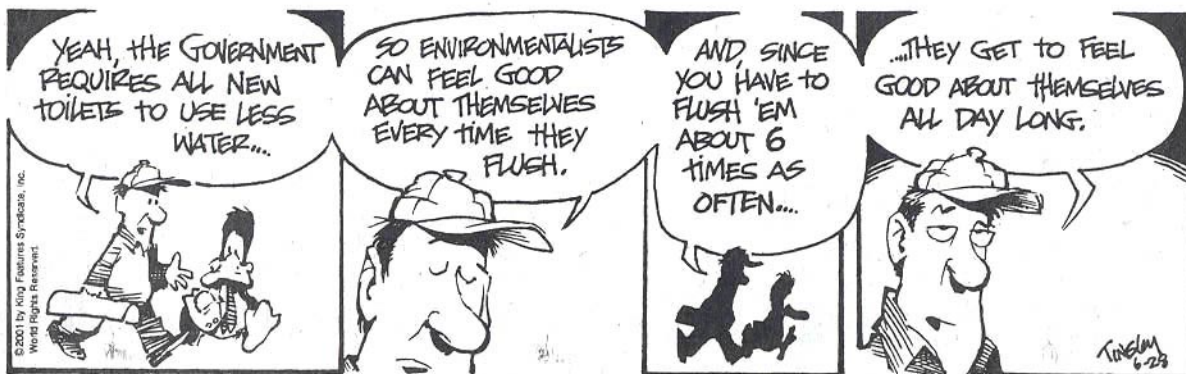
9. The most ecologically sound strategy for treating storm and waste water is
 - A. all off-site
 - B. only storm water on-site
 - C. storm and gray water on-site
 - D. all on-site

10. In Earthships the black water and gray water are treated by
 - A. a living machine
 - B. solar assisted composting toilets and a greenhouse-based wetlands
 - C. cisterns
 - D. none of the above

11. Toilets that use 1.6 gallons per flush
 - A. are totally ineffective at flushing excrement
 - B. are the highest volume/flush toilets legal in the U.S.
 - C. outperform 0.5 gallon per flush toilets
 - D. cannot be used with septic systems

Mallard Fillmore

By Bruce Tinsley



12. Toilets that use no water or energy and produce no waste water include
 - A. Incinolet incinerating composting toilets
 - B. Clivus Multrum composting toilets
 - C. waterless urinals
 - D. all of the above

13. Architects and designers can reduce landfill needs by
 - A. designing recycling centers in each project
 - B. insisting on construction site waste management
 - C. specifying reused building materials
 - D. all of the above

14. Prominent projects that are designed to accommodate recycling include
 - A. the Eden Project
 - B. the Center for Regenerative Studies at Cal Poly Pomona
 - C. Audubon House
 - D. all of the above

15. Valid measures of sustainability include ratings by
 - A. USGBC's LEED system
 - B. internal corporate systems such as Ove Arup's SPeAR system
 - C. SBSE's Regeneration-Based Design and Construction Checklist
 - D. all of the above

16. The commonality between Arne Bystrom's Sun Valley House and Sir Norman Foster's London City Hall (aka GLA Building) is
 - A. high technology assures total sustainability
 - B. both deal with building issues better than site issues
 - C. neither uses passive strategies
 - D. both are icons for the apocalypse rather than for regeneration

17. The green architecture movement in Europe is aided by
 - A. the Kyoto Accord
 - B. political parties
 - C. European Union regulations
 - D. all of the above

18. European green architecture never features
 - A. shading strategies
 - B. natural ventilation
 - C. daylighting
 - D. wait, it features all of the above

19. In major metropolitan areas of the West Coast the most likely place to find free or low cost assistance in designing green and energy efficient buildings is from
- A. the local universities
 - B. the local utilities
 - C. civic volunteers
 - D. professional engineering and architectural societies
20. A device for modeling and simulating sun penetration into buildings is
- A. a mirror box artificial sky
 - B. a heliodon
 - C. a lipstick camera
 - D. all of the above
21. Ken Haggard and Polly Cooper's Trout Farm complex provides an example of harvesting site energy from
- A. a photovoltaic array
 - B. low head hydroelectric
 - C. passive solar energy
 - D. all of the above
22. Techniques for harvesting site energy
- A. are only available to high-tech Western cultures
 - B. are only applicable to rural sites
 - C. require batteries for energy storage
 - D. are applicable in many forms worldwide
23. An energy 'spaghetti chart' shows
- A. how much energy is used per capita in each country
 - B. how much energy is used and wasted in generation, transmission, and end use
 - C. which fuel source was most commonly used in which historic epoch
 - D. none of the above
24. The use of fossil fuels causes
- A. air pollution
 - B. health problems
 - C. water and soil pollution
 - D. all of the above
25. Currently, the least expensive way to add new generation capacity to a power system is
- A. building a new nuclear power plant
 - B. building a new coal-fired generation plant
 - C. building a wind farm
 - D. installing building integrated photovoltaics on rooftops throughout the service area

26. Solar energy has been used successfully at the utility scale in
- A. large photovoltaic arrays
 - B. solar thermal generators
 - C. both of the above
 - D. none of the above
27. The social and environmental value of an energy-saving design can best be assessed by
- A. the first law of efficiency
 - B. the second law of efficiency
 - C. a series of questions about its upstream, downstream, and in use effects
 - D. life cycle costing
28. A key factor in life cycle costing is
- A. the productivity of workers
 - B. tax benefit for building improvements
 - C. time value of money
 - D. none of the above
29. Green buildings pay off through
- A. greater worker productivity
 - B. lower fuel bills
 - C. higher market values at resale or rental time
 - D. all of the above
30. Green building performance can be verified by
- A. computer analysis
 - B. post-occupancy evaluation
 - C. building commissioning
 - D. all of the above

Calvin and Hobbes

